

ABSTRACT OF THE DISCLOSURE

A controller in a fuel cell system performs various operating parameter checks at a predefined schedule, including one or more of a stack current check; a stack voltage check; a cell voltage check; a purge cell check; an oxygen concentration check; a hydrogen concentration check; a stack temperature check; an ambient air temperature check; a fuel pressure check; and an airflow rate check; a hydrogen sensor heater check; a battery voltage check; a microcontroller self-check; and/or toggling a watchdog. The frequency of the checks are set relative to achieve an efficient control of the fuel cell system by selectively distributing the load on the microcontroller.

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